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Understanding Group Dynamics in DIR-Based Improvisational Music Therapy with Autistic Children

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UNDERSTANDING GROUP DYNAMICS IN DIR-BASED IMPROVISATIONAL MUSIC THERAPY WITH AUTISTIC CHILDREN

A THESIS

Submitted in partial fulfillment of the requirements
For the degree of Master of Science
In Music Therapy

by

Anne Therese Crean
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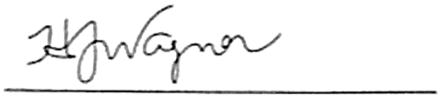

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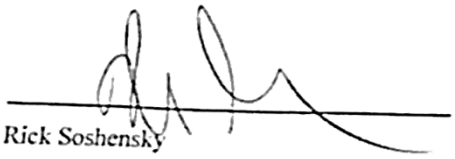

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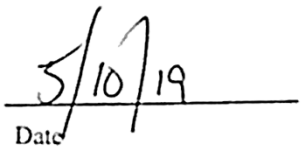

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Abstract

The purpose of this study was to describe the group dynamics of Autistic children in a developmental, individual difference, relationship-based improvisational music therapy group, understand how those dynamics manifested, and to observe changes over time. The primary data source was archived clinical videos from the first, middle, and last sessions of one clinical year. A qualitative content analysis using the Music Therapy Group Improvisation Analysis Model involved a cyclical process of listening, writing descriptive narratives, and analyzing those narratives to develop meaning categories describing the group dynamics. The group dynamics of each session were described individually, and after a process of comparison and recategorizing, the overarching group dynamics were outlined. The first session had four themes: *stability, individual initiations, working together, and differentiation*. The middle session had six themes: *fragmentation, conflict and resolution, client control, music therapist control, holding, and emotional expression*. The final session had five themes: *differentiation, music therapist bridging communication, music therapist modelling, joining musical play, and stability vs. instability*. When compared and synthesized, the overarching themes included: *stability and structure, differentiation and conflict, togetherness, therapist roles, and client roles*. In this study, clients became more interactive with the therapist and each other over the course of the group. Greater musical collaboration was fostered through the differentiation and conflict, and the clients' expanded ways of interpersonal relating indicated the potential benefits of group music therapy for Autistic children.

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To my friends and family, thank you for listening to me, supporting me, and loving me. You gave me strength and hope when I needed it, forever lifting me up.

Finally, thank you to my participants who agreed to have me share their story. It is always an honor to be a witness of the music therapy process. Thank you for allowing me to step into that role as a researcher

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Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by persistent challenges in social-emotional reciprocity, communication, and forming relationships (American Psychiatric Association, 2013). In alignment with the neurodiversity movement and self-advocates (Dunn, 2015), identity-first language (i.e. "Autistic child" instead of "child with autism") will be used in this thesis. This language recognizes autism as a neurological difference and an integral part of Autistics' identity.

Music therapists commonly facilitate groups of Autistic individuals (Kern, Rivera, Chandler, & Humpal, 2013), yet much of the music therapy literature related to this population has investigated individual sessions (Bieleninik, 2017; Carpente, 2017; Gattino, 2011; Geretsegger, 2014; Kim, 2009; Kim, 2008). Music therapy groups provide an opportunity for Autistic children to relate and communicate with peers, addressing some of the core features of Autism, as defined by the DSM-5 (American Psychological Association, 2013; LaGasse, 2014; White, 2015). Because current literature is focused on individual sessions, there is a need for more research in music therapy group processes and its impact on Autistic children. Perhaps receiving music therapy in a group setting provides different benefits or experiences of self as compared to individual sessions, but without more research into the group experience, it is not possible to fully understand the effects of music therapy groups of Autistic children. With further research in both individual and group settings, music therapists will be able to identify and describe what makes each process unique and how both individual and group music therapy can support Autistic children.

In my first clinical position as a music therapist, I facilitated three groups per week with Autistic children and teens. I had recently completed my music therapy internship where I began

training in the developmental, individual-difference, relationship-based (DIR) improvisational music therapy (IMT) approach. My background in a DIR-based IMT model instilled a desire in me to incorporate my client's interests and strengths while making the necessary adaptations to address their individual sensory, emotional, and motor needs. I became overwhelmed trying to address each member's individual differences while supporting the group. Questions like, "What is happening here?" and "How am I supposed to bring together this group and simultaneously support individual needs?" emerged. As I became more comfortable and got to know the group members, together we experienced cohesion and flow in shared music experiences. Still, questions remained, and my curiosity about how music therapy groups function, what occurs between members, and the role of the music continued to grow.

Although there are similar processes in group music therapy and group verbal therapy, music therapy groups have unique aspects specific to the musical medium that could not occur in traditional psychotherapeutic verbally-oriented groups (Skewes, 2002, p. 49). For example, clients can express themselves simultan eously in music. Skewes (2002) suggests that having music as a therapeutic medium indicates that there are dynamics at play specific to the group music therapy process.

The current study analyzed a clinical example to investigate group dynamics. A musical analysis model was used to write narrative descriptions of group improvisations of a Developmental, Individual Difference, Relationship-Based (DIR) improvisational music therapy (IMT) group of Autistic children from ages 8 to 12. A qualitative content analysis was used to describe group dynamics overtime within the context of the group's music.

Literature Review

Group Process and Dynamics

Music therapists often use psychotherapeutic principles like group dynamics and group process to understand music therapy groups (Skewes, 2002). Group process and group dynamics are closely related phenomena and are sometimes used interchangeably. However, in this thesis, group process is understood as the nature of relationships of group members and group dynamics are how interpersonal relationships create a social structure of the group that promotes growth in all of the members (Phan, Rivera, Volker, & Garrett, 2004, p. 236).

The group process of music therapy groups commonly involves working through conflict and developing a trusting environment to express emotions and receive support. Several interpretivist studies describe the interplay between conflict resolution and a secure environment (Aigen, 1997; Cunha, 2017; Sorel, 2010; Tamplin, Baker, Grocke, & Berlowitz, 2014). In a community music therapy group of university maintenance employees and students (Cunha, 2017), conflict resolution and being heard were two of the affective phenomena that had notable meaning for the group members. When interviewed, the participants shared that conflicts in their personal lives were explored in music therapy group. Professionally, they experienced feelings of being invisible, but in the group they felt they had a voice. Similar themes of sharing feelings in a comfortable, supportive setting emerged in a study of a therapeutic singing and a music appreciation group for adults with chronic quadriplegia (Tamplin et al., 2014). When interviewed about their experiences, the participants shared that in both music therapy groups referenced feeling supported and comfortable sharing their feelings with the group. Increased emotional expression, intimacy, and conflict resolution were also themes in studies of music therapy groups of Autistic children and teens (Aigen, 1997; Sorel, 2010).

There is a common sense of support described in music therapy groups where clients express emotions and work through conflict. The group process in music therapy appears to involve intimate relationships, rooted in trust that allows for emotional expression and conflict to occur without being destructive to the group. Even authors of studies that did not specifically analyze group process mentioned aspects of the group members feeling closer in a supportive environment (Eren, 2015; White, 2015). The relationships developed over the course of the group process appear to be essential to address conflict, provide support for each other, and for self expression (Aigen, 1997; Cunha, 2017; Eren, 2015; Sorel, 2010; Tamplin, Baker, Grocke, & Berlowitz, 2014; White, 2015). These features of the group process exist in the context of relationships, and it is through those relationships that change occurs.

Styles of relating in music therapy groups were described by Amir and Bodner (2013) based on the roles that group members take. One of the most common styles of relating was "identifying with" (p. 256), where group members shared their personal experiences with others in similar situations. The role of identifying with appeared to help bring the group together and showed the group members cared for each other. For example, identifying with others was especially high in the sessions during which a group member processed the death of a relative, and the group supported her in processing that loss (Amir & Bodner, 2013). The interactions between group members create a supportive environment, demonstrating how the group dynamics can enact group process. Because this study focused mainly on the perceptions of the group members, descriptions regarding how these roles manifested in the group or of the musical context were not included.

However, it has been suggested by some literature that the music can embody and support group dynamics (Aigen, 1997; Skewes, 2002). For example, Aigen (1997) described the

music as a container, connector, and mirror for the group process. The music embodied existing emotions or physical expressions, supported verbal interactions and emotional expressions, and gave those expressions a deeper meaning and context within the group. Understanding how group dynamics manifest and including the musical context in research could provide greater insight to how client interactions occur in a therapeutic way.

The centrality of music in relation to group dynamics in music therapy provides a departure from the traditional psychotherapeutic theory that group dynamics is based in. When nine music therapists from the United States with significant clinical experience and published literature on music therapy group improvisations were interviewed, they reported that music therapy group improvisations are a unique process because of the music and offer different experiences than talk therapy (Skewes, 2002). Unlike talk therapy groups, in music therapy groups, group members could address each other simultaneously in the music. Connection and exchanges between group members happened spontaneously, sometimes on a transcendental level, and the group dynamics were manifested in the active music making of the group. Improvised group music created new experiences of self, and supported free expression because words weren't needed to give a specific and precise meaning to emotions. Participants noted that group improvisation provides a variety of musical outcomes such as spontaneous, communicative, or flexible playing, and opportunities to increase awareness of self and others (Skewes, 2002, p. 50). The study showed that improvised music can be viewed as a distinct group experience where features of clinical group work are observable within the music itself. The role of improvised music as a distinct group experience, suggests that music can take a more prominent role in understanding group process and dynamic**.**

Improvisational Music Therapy

Improvisational music therapy (IMT) involves the process of creating sounds spontaneously to address clinical needs of clients (Brusica, 1987). IMT is used across populations and therapeutic orientations, addressing a range of clinical situations and goals. Improvised experiences in music therapy provide opportunities for growth related to one's physical integration between self and environment, self-expression, identity, verbal and nonverbal communication, expressions and understanding of unconscious material, and intra and interpersonal relationships (Bruscia, 1987, pp. 502-503).

Autistic children are one population that benefits from IMT in areas related to foundational social skills like joint attention and engagement along with relational capacities (Bieleninik et al., 2017; Carpente, 2017; Kim et al., 2008, 2009). A classic example of an improvisational model being used with Autistic children is Nordoff-Robbins Music Therapy (NRMT). This approach developed out of improvisational, clinical work at special education and residential settings for disabled youth beginning in 1959 (Kim, 2004). In the NRMT model every individual is believed to have inborn musicality which embodies a freedom of expression and aspects of self-actualization (Nordoff & Robbins, 2007, p. 3). Music functions as the primary agent of change, and the majority of clinical experiences offered are improvised. Although NRMT was the first improvisational model used to meet the needs of Autistic children (Kim, 2004), it is not the only form of improvisational work with Autistics. A generalized set of treatment guidelines for IMT with Autistic children was developed (Geretsegger et al., 2015). It highlights the importance of unique and essential characteristics of IMT with Autistic children such as: facilitating musical and emotional attunement and self-regulation; scaffolding the flow of interaction musically; and tapping into shared history of musical interaction (p.271). Essential but not unique characteristics were: building and maintaining a positive therapeutic relationship;

providing a safe, low anxiety environment; following the child's lead (e.g. focus of attention, behavior, and interests); setting treatment goals, and evaluating progress; and facilitating enjoyment through acceptance, positive affect, and experiences of mutual joy. (p. 271).

IMT is a good context to observe group dynamics. In a group setting, improvisations are commonly valued as a medium for non-verbal communication between members (Pavlicevic, 1999; Sutton, 2018). It has been theorized that spontaneous interaction promotes the development of group dynamics (Phan, Rivera, Volker, & Garrett, 2004). Yalom (1970) emphasized the importance of working in the here and now for the social microcosm of the group to emerge and for group dynamics to be enacted. Improvised experiences require creating music spontaneously and interacting with others in the here and now.

DIR improvisational music therapy theory and practice. DIRFloortime® is a therapeutic model that promotes social-emotional and cognitive development (Greenspan & Wieder, 2006) with Autistic individuals. DIR stands for developmental, individual difference, and relationship based, which describes the is the theoretical grounding of this approach, and Floortime is the term used for the therapeutic interventions (Wieder & Greenspan, 2003). The DIR® model asserts that children learn from their interactions with others. Relationships and shared emotional experiences help children form their understanding of self, others, and the world around them (Greenspan, 1992; Greenspan & Wieder, 1997). The centrality of relationship in this model correlates well with group dynamics which are a form of relational learning.

DIRFloortime® and IMT share similar philosophical underpinnings and clinical practice (Carpente, 2012a). They both emphasize empathetically following the client's lead by meeting children in their interests and their emotional state of being. Clinicians can then challenge the

clients to enter more deeply into creative, communicative, and relational play (Greenspan, 1992; Greenspan & Wieder, 1997, Geretsegger et al., 2015). Carpente (2013, 2017) stated that in DIR-based IMT, interactions take place within the context of music. The music therapist progresses from musically following the child's lead, to scaffolding musical interactions to two-way communicative play, and finally engaging in joined play where the client initiates their original ideas freely. When a client withdraws from interaction, the clinician returns to following the client's lead (Carpente, 2013, 2017), and then proceeds through the other stages again. This approach can be applied using improvisational, re-creative, and compositional methods. When the DIR-based music therapy is implemented, the spirit of spontaneous creation and adapting the client's in the moment needs is ever present, and improvisation is the primary method used in this approach (Carpente, 2013).

The current literature on DIR-based IMT is steadily growing, yet there is still a need for more rigorous research. Carpente (2017) studied the effectiveness of DIR-based IMT using the Functional Emotional Assessment Scale (FEAS) to measure Autistic children's social communication. In this small, non-randomized sample, three out of four participants showed significant improvement in measures of self-regulation, forming relationships and engagement, two-way communication, behavioral organization, and problem-solving. The improvements observed in the participants of this study are encouraging, and to some extent demonstrate that areas of social and emotional development can be addressed in DIR-based IMT. However, with no control group and a small sample, drawing a direct causal relationship between music therapy and the measured outcomes was not possible. A larger, randomized sample is needed to indicate effectiveness of this treatment.

DIR-based IMT group work was described in a paper exploring the use of Nordoff-Robbins Music Therapy inspired musical working games with groups of Autistic students at a DIRFloortime® school (Kandler, 2017). Although the paper was not formal research, Kandler described that by using musical working games in DIR-based IMT, he observed growth in shared attention, engagement, purposeful communication, and self-confidence. He suggested that the emotionally-informed music and the playful nature of the game encouraged participants to more deeply engage in the group experience. Music therapy can be used to support social-emotional development from a DIR perspective in a group setting, but more research is needed to conceptualize its' benefits.

Music Therapy and Autistic Children

Music therapy literature regarding Autistic children is growing steadily. The most recently published Cochrane review analyzed a selection of ten randomized control trials (RCT) and controlled clinical trials to study the effectiveness of music therapy with Autistic children (Geretsegger, Mössler, & Gold, 2014). The authors concluded that music therapy was more effective than placebo therapy or standard care on primary measures related to social interaction and secondary measures of social adaptation. These findings reinforce the focus of additional music therapy scholarship (Bieleninik et al., 2017; Carpente, 2017; LaGasse, 2014; Kim, Wigram, & Gold, 2008; Kim, Wigram, & Gold, 2009; Sorel, 2010; Thompson et al., 2014; Thompson, 2017; Venuti et al., 2017) on improving social, relational, communicative, and behavioral outcomes for Autistic children, all of which are characteristics of ASD as defined by the American Psychiatric Association (2013).

Foundational social skills. Several research studies reported improvements in foundational, pre-verbal social skills with Autistic children, specifically joint attention and child-

initiated engagement behaviors (Bieleninik et al., 2017; Carpente, 2017; LaGasse, 2014; Kim et al., 2008, 2009; Venuti et al., 2017). Joint attention is a skill that enables individuals to share focus with other people towards each other and objects (Kim et al., 2008), and social referencing behaviors such as eye gaze or body positioning are indicators of joint attention (Kim et al., 2008; LaGasse, 2014; Venuti et al., 2017). Increased social referencing behaviors have been observed through behavioral coding measures in both individual sessions (Venuti et al., 2017) and in a group setting (LaGasse, 2014). In individual sessions, Autistic children showed an increase in positive vocalizations and purposeful gesturing in the improvisational music therapy sessions and after treatment (Venuti et al., 2017). In groups, Autistic children increased joint attention with peers and eye gaze towards group members (LaGasse, 2014). Randomized control studies have also found increases in joint attention in individual music therapy, as measured by the Early Social Communication Scales (Kim, 2008), and the Social Responsiveness Scale (Bieleninik et al., 2017). Another foundational social skill that is encouraged in individual music therapy is engagement, where the child seeks out, gestures to or responds to the therapist in a shared experience (Carpente, 2017; Kim et al., 2008; Venuit et al., 2017). Though the studies above reported a common trend of improved social skills in music therapy, it is not possible to generalize those results because of the small sample sizes and lack of randomization. Additionally, more germane to the present study, only one of the studies was conducted in a group setting.

Developing relationships. In addition to the social skills required to build relationships, recent studies have investigated the quality of relationships developed in music therapy between the music therapist and child in individual therapy and between the child and their mother in family centered music therapy (Kim et al., 2009; Knapik-Szweda, 2015; Sorel, 2010; Thompson,

McFerran, & Gold, 2014; Thompson, 2017). Autistic children in individual music therapy have been observed to increase their level of active participation, initiation of engagement through seeking out the therapist, and positive responses to therapist demands (Kim et al., 2009; Knapik-Szweda, 2015). Essentially, in music therapy Autistic children are active participants that both initiate and respond in their relationship with their music therapists. Mutuality and reciprocity can occur in the relationship between Autistic children and their music therapist.

In addition to being responsive to the music therapist, Autistic children experience trust and positive shared emotional experiences in robust relationships with their music therapists. Over the course of therapy, Knapik-Szweda (2015) assessed an improved "stability and confidence in the musical relationship and the relationship's development" (p. 163). Additionally, behavioral coding measures show that Autistic children have positive shared emotional experiences, described as "intense and frequent events of joy, and emotional synchronicity" with their music therapist (Kim et al., 2009, p. 397). It appears that there is a depth to the way Autistic children relate to their music therapists, evidenced by them sharing in collaborative play, having positive emotional experiences, and finding stability in a developing relationship (Kim et al., 2009; Knapik-Szweda, 2015).

The quality of relationships developed in individual music therapy suggest possible relevance for the group therapy context where multiple positive relationships could develop between clients. The relational benefits of music therapy group work is explored in the context of family centered music therapy between parents and their Autistic children (Sorel, 2010; Thompson et al., 2014; Thompson, 2017). In a Nordoff-Robbins Music Therapy mother-son dyad, music therapy provided opportunities for an Autistic child and his mother to develop their relationship through moments of intimacy and conflict-resolution (Sorel, 2010). Similarly,

mothers who participated in family centered music therapy dyads with their Autistic child described an increase in “interconnectedness, engagement, emotional attunement, and increased positive perceptions of their child” (Thompson et al., 2014, p. 864).

When interviewed again four years after treatment, the mothers reaffirmed the results from the initial study and reflected on the impact of family centered music therapy from a long-term perspective (Thompson, 2017). The mothers described how their experiences with family centered music therapy sustained outside of music therapy by giving them more confidence in their parenting and a willingness to follow their child’s lead to support their social interactions. Music therapy helped support the strengthening of the mother-child relationship and provided new ways to interact (Sorel, 2010; Thompson et al., 2014; Thompson, 2017), and in one case these changes were affirmed to continue after treatment (Thompson, 2017). Overall, it appears that the social and relational benefits of music therapy can exist within the group context, and that the experiences of relationship in music therapy contain therapeutic potential.

Music Therapy Groups With Autistic Children

In the studies of groups described in the previous section, outcomes for Autistic children were consistent with studies of individual sessions that had a similar focus. The continuity between individual and group music therapy outcomes suggests that there may be some overlap in the benefits of group and individual music therapy for Autistic children, but there has been limited research on the unique benefits of the group setting for Autistic children (Kern et al., 2013). Interpretivist case studies have been the main form of research for examining music therapy groups with Autistic children. The research on group music therapy with Autistic children and teens identify that individual needs are met in the group context (Aigen, 1997;

White, 2015), and that the patterns of relating in music therapy groups can create opportunities for that growth (Aigen, 1997; Eren, 2015).

A case study of a music therapy group of Autistic children (White, 2015) found that each group member had growth and increased frequency in their primary manner of engaging in music making. The children's individual goals and needs were met in the group context. Although specific analysis regarding group process or how the group supported those individual goals was not explored, the author observed a common feeling of togetherness and that the music therapy sessions provided a safe encouraging environment for peer interaction. Another case study described a consistent progression of group cohesion, which was attributed to growing trust and familiarity with group (Eren, 2015) Indeed, it appears that group music therapy context can provide an opportunity for social interaction and communication to occur naturally between peers (Eren, 2015; White,2015).

Group therapy principles have been used to understand music therapy with Autistic children (Aigen, 1997). In a naturalistic inquiry of a group of Autistic and Developmentally Delayed teens receiving Nordoff-Robbins Music Therapy, Aigen (1997) identified this group's dynamics and how they impacted the group's process. The interactions and relationships between group members helped to bring about change individually and foster group cohesion. The process involved conflict resolution, expressing emotions, receiving support, and developing group cohesion. The group members challenged the authority of their music therapists, resulting in a shift to deeper shared experiences with more equality, spontaneity, and emotional expressions between group members. Another primary conflict was working through the expressions of anger and aggression that manifested in physical actions. After addressing the group members physicality, the client's demonstrated greater awareness and concern for each

other verbally and musically, and the group became a source of emotional support for its members. Following sessions with emotionally charged interactions, the group members each made individual progress towards their musical goals. The group dynamics manifested in how the relationships between the group members brought up areas of need for each member and gave them the opportunity to grow individually.

Experiences of relating and communicating are often the primary gains of group music therapy, which are supported by the musical interactions and relationships between the music therapist and group members. It seems that group dynamics are an essential aspect contributing to the benefits of group music therapy for Autistic children. However, the theory of group dynamics originates outside of the music therapy context. By observing those dynamics through the music insight can be gained to the therapeutic encounter. A relationship-based and improvisational music therapy group can provide the context necessary to observe how spontaneous music making in relation to others impacts the therapeutic process. Several open-ended research questions have been developed as a starting point for this study. They are:

1. What group dynamics are observed in a DIR-based improvisational music therapy group of Autistic children?
2. How do those group dynamics manifest in a DIR-based improvisational music therapy group of Autistic children?
3. Can changes in group dynamics be observed over time? If so, what is the nature of these changes?
4. What role does music play in the group process?

Method

This study is a qualitative content analysis of a DIR-based IMT group's improvisations from three archived sessions. Participants were two ten-year-old Autistic children who attended a DIR-based IMT group at The Rebecca Center for Music Therapy and their music therapist.

Design

This study sought to describe group dynamics – understood here as the interpersonal relationships that embody the social microcosm of the group and evoke the core issues of all the members (Phan, Rivera, Volker, & Garrett, 2004) - of a DIR-based IMT group over time. A qualitative content analysis was adopted because its cyclical style of data analysis was equipped to reveal and richly describe patterns of interactions within group dynamics (Ghetti & Keith, 2016). Of note, qualitative content analysis uses existing data while referencing its context (Ghetti & Keith, 2016); this is beneficial to understand the group as it minimized outside influence on the understanding of the clients' behavior.

Participants

Purposive sampling was utilized because it was necessary to select a group that was consistently video recorded throughout the clinical year and that corresponded with the focus of the study. The following inclusion criteria were adopted:

1. Group members had a diagnosis of ASD as confirmed by clinical record.
2. Group members were between 8-12 years old. At this music therapy clinic children are placed in group sessions based on developmental capacity, so children in groups are often older than other settings.
3. The music therapy group had not worked together previously so that this study can observe their group dynamics as they emerge.
4. An archive of the group's videotaped sessions were available for review.

5. The clinician facilitating the group had at least three years of experience working in the DIR-based IMT approach.

The group was recruited through a university affiliated music therapy clinic. The clinic director provided a letter to the IRB permitting the study to take place (Appendix A). Then, the music therapists of the clinic were contacted through email (Appendix B) to recruit a group that fit the inclusion criteria of the study and to set up meetings to provide informed consent.

A small group was sought by this researcher to promote a more in-depth analysis of interactions between members. With fewer group members, the researcher could better identify and describe the interactive nature of the group's music. This was necessary to gain an understanding of how individual's music impacts peers and the group overall.

The legal guardians of each of the children (Appendix C) and the music therapist (Appendix D) signed informed consent which permitted the researcher to have access to the clinical videos from their first year of group therapy in the 2015-2016 clinical year. At that time, the group members were Victoria, a 9-year-old Autistic girl with, and Mark, a 9-year-old Autistic boy. Their names have been changed to maintain their confidentiality. The music therapist's clinical approach was informed by DIR-based IMT and he was working toward his Nordoff-Robbins certification at that time.

Setting

This study included videos of music therapy sessions recorded at the university affiliate music therapy clinic. This center employs music therapists who have been trained in DIR-based IMT. The center serves individuals with neurodevelopmental disorders across a wide range of ages, from 3 to 30. Additionally, it is more common in this setting for older children to be placed in groups than younger children, because developmental skills such as self-regulation and

attention are considered prerequisites for group work. The study's inclusion criteria of older children is congruent to the clinic's placement of children in groups.

Materials

The materials for data collection included three video recordings of a music therapy group. The secure file sharing website, www.box.com was used to access and view the videos. The Music Therapy Group Improvisation Analysis Model (MTGI- AM) (Appendix E) (McFerran & Wigram, 2005) was used to create descriptive narratives of the group improvisations. A laptop was used to access the videos without downloading them and to write the data analysis and final report.

Procedure

Following Molloy College Institutional Review Board (IRB) approval, the first step of this research process was to recruit a group from The Rebecca Center for Music Therapy and obtain completed informed consent of the group members' guardians and the music therapist, allowing the researcher to view and analyze past group sessions. The second step was to gain access to the videos through www.box.com. This is the standard video storage site that the music therapy clinic uses and is encrypted and secure.

The third step was to use the MTGI-AM (McFerran & Wigram, 2005) to create narrative descriptions of the first group improvisation of the three sessions. The first, middle, and last sessions were used to gain an understanding of changes in group dynamics over the course of treatment. The MTGI-AM provided a framework for the researcher to write descriptive narratives of the improvised clinical music using repeated listenings, each with a different focus (McFerran & Wigram, 2005). This form of analysis is described in detail in the following data analysis section and Appendix E. The MTGI-AM was selected because it was created to

describe group dynamics in group improvisations (McFerran & Wigram, 2005), which is the focus of this study. The use of multiple listenings and narrative provides a holistic, thorough understanding of the group's music. The MTGI-AM also functions well within a qualitative content analysis, which requires a thorough description of context and a systematic approach to data analysis. The narratives created from the MTGI-AM described the observed group dynamics in each session and how they manifested (McFerran & Wigram, 2005), answering the first two research questions. The narratives were analyzed to gain an understanding of changes in group dynamics overtime and the role of the music (McFerran & Wigram, 2005).

The fourth step was comparing the narratives to determine any changes in dynamics over time. The final step of the MTGI-AM requires the researcher to identify key statements from each previous narrative, organize them into structural categories and meaning categories, and then use those categories to write the final narrative. The key statements and categories were used as codes to identify patterns of relating across all three videos, which will then be organized to describe the group's dynamics over time. In this stage, the cyclical pattern of revisiting codes and categories was essential to accurately compare the dynamics of the group between each session.

The fifth step was to complete the coding process described above with focus on the music and identifying its role within the context of group dynamics. The musical key statements were compared and integrated with the findings related to group dynamics over time by organizing them into new categories. The sixth step was writing the final report which involved interpreting and presenting the categories in a cohesive final narrative. This process required viewing the data from a wider lens, identifying key findings and providing an explanation of their meaning.

Data Collection

In this study, narrative data was derived from two sources: (1) observations of archival clinical videos of three 30-45 minute group music therapy sessions and (2) written descriptive narratives through the MTGI-AM on the researcher's subjective impressions of the group, music, interpersonal dynamics assessed through Brusica's (1987) Individual Assessment Profile, and the group leader's improvisational techniques.

The first, mid-year, and final sessions of the year were the videos selected for analysis, and the first improvisation of each session was analyzed. The three time points provided information on change over time, and the selection of the first improvisation was used to reduce bias because the researcher was not able to select the most ideal improvisations. Group improvisations were the main source of data because they best represent the DIR-based IMT approach. Additionally, it was theorized that spontaneous interaction promotes the development of group dynamics (Phan, Rivera, Volker, & Garrett, 2004), and improvised experiences require creating music spontaneously.

Data Analysis

The MTGI-AM (McFerran & Wigram, 2005) was used to conduct the data analysis because it was designed to describe group dynamics and it is congruent with qualitative content analysis. The MTGI-AM has six levels of listening and description:

1. Open: the researcher listens for broad impressions of the improvisation and writes a narrative of their personal response to the music.
2. Musical: the researcher listens for relevant musical properties and how the change over time and then describes those musical properties in a detailed narrative.

3. Intramusical: the researcher scores Brusica's (1987) Individual Assessment Profiles based on the group improvisation and then sentences about each of the scores is written in narrative form.
4. Group Leader's Music: the researcher listens to and then describes the group leader's musical contributions and use of improvisational techniques.
5. Final: the researcher listens to the improvisation with a wholistic focus and then synthesizes the information of the previous narratives to describe the essential aspects of the group improvisation.

Qualitative content analysis can be applied to narrative data from a variety of sources (Taylor-Powell and Renner, 2003) and this study uses the observations of clinical video as a source of narrative data. In qualitative content analysis, the researcher becomes well versed in the data (Taylor-Powell and Renner, 2003), and the MTGI-AM required multiple listenings of the video and reading of the narratives, which allowed the researcher to become immersed in the data. The MTGI-AM also enabled the researcher to focus analysis on group dynamics through multiple perspectives, which is another step of qualitative content analysis (Taylor-Powell and Renner, 2003). Additionally, the analysis had focus by using only the first group improvisation of each video.

After becoming familiar with the data and focusing the analysis, the researcher categorized data through identifying themes and patterns and then organizing them into categories (Taylor-Powell & Renner, 2003) through the MTGI-AM (McFerran & Wigram, 2005). The synthesis of the final listening and description involves a process of thematic categorization. First *key statements* were identified from the descriptive narratives and included phrases that provided essential information about the group improvisation. Then, the key

statements were organized into *structural categories* based on the function of musical elements in the improvisation. After that, the key statements were organized into *meaning categories* which were themes that described the dynamics of the improvisation. The final stage of the qualitative content analysis is "identifying patterns and connections within and between categories" (Taylor-Powell and Renner, 2003,p. 5). The *meaning categories* were compared across the three time points and reorganized into categories representative of the group overall. The categories were summarized, combined, and tallied to note the number of repetitions across all time points. This final step of interpreting the data gave meaning and significance to the analysis (Taylor-Powell & Renner, 2003).

Results

The purpose of this study was to describe group dynamics of Autistic children in a DIR-based improvisational music therapy group. The primary data source was three video excerpts of a music therapy dyad from their first, middle, and last sessions. The MTGI-AM was used to create descriptive narratives of the group improvisations, then the narratives were coded and categorized. First, key statements from each narrative were noted. Next, the key statements were organized into structural categories of their function related to musical elements. Finally, the key statements were reorganized into meaning categories based on similar roles relating to group dynamics. After each improvisation was analyzed, the meaning categories were compared across each timepoint to create overarching themes. In this report, first a description of the group will be given, then each improvisation will be detailed, followed by the meaning categories of each timepoint. Finally, the overarching themes will be described.

Description of the First Session

The improvisation included piano, voice, and a miniature guitar, creating the texture of a song structure with the piano as an accompanying instrument. There were three main sections. The first introduced the main theme and structure, the second was more open and explorative, and the third recapitulated the two sections before. The improvisation began with Mark asking "What's Victoria's song? Superheroes?" and Victoria responding "Superheroes!" The first section contained a strong rhythmic ground characterized by a repeating eighth note figure played by the music therapist on the piano. The music therapist sang a similar melodic rhythm using the first three notes of the scale of the lyrics "I'm a superhero." Variations on that theme were created by sequencing the intervals, singing segments of the theme, exchanging that phrase antiphonally with Victoria, or by Mark completing a phrase. The music therapist and Victoria's vocal parts wove together, overlapping and exchanging ideas. The music was of moderate tempo and volume, with intermittent loud and fast movements initiated by Mark. Embellishments like glissandi or tremolos were used extend some phrases and to accompany Mark's movement. Occasionally, the pulse was abandoned to accommodate verbal actions or movements that did not fit exactly in the established rhythmic structure.

The second section began with Mark telling a joke, "Why do superheroes fly? Because you fly in the city!" As this interaction was emerging, the music therapist moved away from the established pulse and rhythmic patterns, creating more openness and fluidity in a slower tempo. The melody changed to have longer phrases and larger intervals more thirds and fourths.

Mark continued verbally: "She flies away, two superheroes, she saves the town, she saves the city."

The music therapist sang: "Because she's a---"

Mark said, "Upset."

The music therapist continued, “Well she’s a s---”

And Mark completed the phrase, exclaiming “Superhero!” That interaction began the third section a return to the tempo, dynamic, rhythmic pulse, and rhythmic patterns of the previous section. However, the melody was higher, centered around the fifth note of the major scale, and had longer phrases until the end where it returned to the original melody.

First session meaning categories. Four meaning categories were developed from the process of coding and comparing the open, musical, dynamic, and group leader descriptive narratives. They included *stability, individual initiations, working together, and differentiation* (See Table 1).

Table 1

Examples of Key Statements in the Meaning Categories of the First Improvisation

Meaning Categories	**Selected Key Statements**
Working Together	● The music therapist, Mark, and Victoria established the theme and lyrics together. ● The melodic themes were developed from contributions of all members and changed over time.
Individual Initiations	● Mark's jumping and pretending to fly created new phrasing and helped bring about the transition into the B section of the improvisation. ● Victoria's position at the microphone stand indicated the overall mood of the improvisation. ● Mark and Victoria added individual initiations by singing variations of the main theme in the context established by the music therapist.
Stability	● Stability was found in the repeated lyrical content. ● The piano created a harmonic base where E-flat major was the tonal center for improvisation. ● The piano created a rhythmic ground where meter and eighth note figures were frequently used.
Differentiation	● Mark would abruptly play and sing with a forte in sections that was mezzo forte or mezzo piano. ● Victoria would occasionally mumble her lyrics and melody in a manner that also contrasted the music. ● There were more drastic changes within the A and B sections of the improvisation. The B section had openness and fluidity in a slower tempo.

Stability. The texture, tonal center, rhythm, meter, pulse, lyrics, and melody of the music created stability in the improvisation. The piano, played by the music therapist, acted as an accompanying instrument, creating the tonal center in E-flat major and the rhythmic ground of eighth note figures. The melodic rhythm initiated by the music therapist, was similar to the

rhythmic figures on the piano, and the main melodic theme used the first three notes of the scale. Repetition of rhythm, melody, and lyrics were used to encourage continued participation, and often space was left in the music both in silences after a musical model and in space between melodic phrases. Those pauses in context of repeated musical material encouraged Victoria's engagement in alternating singing and her initiation of melody. Each of the musical elements described above, provided stability, however they were used flexibility enough for variation to occur. For example, harmonic inversions, voicings, and progressions were cohesively adapted; rubato and changes in rhythmic subdivisions were implemented; and variations of melodic themes occurred, and Victoria and Mark initiated new lyrical content the course of the improvisation.

Individual initiations. Both Victoria and Mark initiated through body movements and voice, which were influential in shaping the improvisation. Mark created new phrases and helped bring about the transition to the B section by jumping and pretending to fly. The overall energetic and empowered mood of the improvisation was influenced by Victoria's posture standing at the microphone stand. Mark and Victoria spontaneously sang variations of the main melodic and lyrical theme. Individually, Mark demonstrated autonomy in volume. When he joined in singing, he sang loudly, which changed the direction of the improvisation. Victoria demonstrated musical autonomy through her used of varied vocal sounds. The music therapist imitated her ideas, thereby bringing her vocal timbre to greater prominence in the improvisation. Mark also took on a unique role by beginning each of the sections of the improvisation. He started the improvisation by being the first one to suggest they sing about superheroes, and his other lyrical and verbal contributions started the middle and final section as well.

Working together. There was a supporting and encouraging environment created by Victoria, Mark, and the music therapist. Together they developed the themes and lyrics of the improvisation. Mark and Victoria agreed upon the idea of superheroes, which was the basis for the improvisation's lyrical content. The melodic themes were developed from contributions of all members and changed over time. The music therapist and Victoria's vocal parts wove together, overlapping as they exchanged ideas antiphonally, and Mark completed the music therapist's vocal phrases. The music therapist reflected and incorporated the client's expressions and emotions. For example, embellishments like glissandi or tremolos were used extend some phrases and to accompany movement of Mark. In addition, Victoria and Mark were seeking each other out, playing together, and including each other. They embodied a joyful and spontaneous playfulness. When they needed more support in playing together, the music therapist used gestural and verbal prompts to encourage participation and interactions between them. The music also embodied this coming together. Most musical elements equally contributed to the improvisation, tension was built and released in a balanced way, and there was congruence within the music.

Differentiation. At times, there was a sense that the group members wanted to connect but would not successfully interact within the music. This manifested in the way Mark and Victoria used dynamics. Mark would abruptly play and sing loudly, dominating the overall moderate volume, and separating himself from the group. Alternatively, at times Victoria would mumble her lyrics so she was barely heard. The music therapist used structuring techniques to bridge gaps in connection, bring one-on-one interactions back to the group. Each section of the improvisation also demonstrated differentiation as there were drastic changes between the A and B sections. For example, the A section had a moderate tempo while the B section had openness

and fluidity in a slower tempo because the pulse and rhythmic patterns were loosened to accommodate verbal actions or movements that did not fit exactly in the established rhythmic structure. Through the changes between each section the music therapist provided new ways to meet the emerging ideas of the clients.

Description of the Middle Session

Both Mark and Victoria appeared distressed at the beginning of the improvisation this session. Mark was loudly spelling "China" while moving around the room, and Victoria was laying on the floor, kicking her legs. The music therapist began the improvisation by playing a gentle pulse on the guitar and singing, "What's the matter today?" Mark interrupted his rhythmic ground by playing the piano loudly at a faster speed than the guitar, and by continuing to recite phrases about China. The music therapist attempted to verbally direct the clients to play together. First, he asked Victoria to join a song about China, but she refused. Then the music therapist told Mark to ask Victoria what she wanted to do. Instead, they verbalized at the same time about different things. Again, Mark spelled "China" loudly, and Victoria quietly whimpered for her mom and dad.

The music therapist sat on the floor with Victoria while playing at a faster tempo and picking eighth notes on the guitar while singing, "Made in China" in a pentatonic scale. The music intensified because Victoria took the music therapist's hand to make him strum faster and louder. The Victoria initiated a different melody of a precomposed song. The rhythmic ground was disrupted again as the music therapist tried to incorporate her singing into the improvisation and then by verbally redirecting Victoria from grabbing him. The music therapist paused the improvisation asking, "What's the matter, guys?" Victoria said, "Go home." and Mark said,

"Mom." The music therapist replied, "Why do you want to go home? We just started;" and repeated, "What's the matter everybody?"

Then the music therapist put down the guitar and began a new theme on the piano. He created steady rhythmic ground at a moderate tempo and sang "Everyone's upset" on a descending melody, doubled on the piano. He repeated this phrase throughout the improvisation. Victoria sang "Mommy" on a descending interval, and the music therapist answered with a new melodic figure and lyric, "You're upset." He repeated that phrase then sang, "It's okay..." on the same melody, and continued the phrase with a descending melody, "...to be upset."

At this point, Mark joined in by vocalizing on long tones over half steps resolving in key, while the music therapist continued singing, "It's okay to be upset." Victoria joined in vocalizing when she realized there was no microphone in the room. She whined in pitch, "I want the microphone" over a chromatic melody. The music therapist repeated, "It's okay to be upset," then the volume of the improvisation increased as Victoria cried, "Mommy! Mommy!" The music therapist joined her in the crescendo while sequencing the melody down whole steps. Victoria began to cry and the music therapist sang, "Victoria's crying." Victoria responded by rapidly vocalizing, "Mama! Mama! Mama!" and "I wanna go home! I wanna go home!" The music therapist maintained the rhythmic ground while singing, "She wants to go home." Mark strummed the guitar twice in time with this melodic change. Then the music therapist sang, "It's okay to be upset" on a lower melody and then returned to the main theme. Victoria joined the melody while initiating the lyrics, "This could be so much fun." The music therapist echoed her phrase and added, "It could be okay, we could sing songs we want to sing." Then Mark joined in singing, "Like do do do" on a descending stepwise melody. The music therapist answered his

phrase by asking what he wanted to sing, and Mark asked for Simon's Bells. Victoria vocalized loudly and the piano swelled with her and then resolved the improvisation on the tonic.

Middle session meaning categories. Six meaning categories were developed from the process of coding and comparing the open, musical, dynamic, and group leader descriptive narratives. They included *fragmentation, conflict and resolution, client control, music therapist control, holding, and emotional expression* (Table 2).

Table 2

Examples of Key Statements in the Meaning Categories of the Middle Improvisation

Meaning Categories	**Selected Key Statements**
Fragmentation	● The music was initially pulled between their two states and lyrical ideas (e.g. Mark's verbalizations about China, and Victoria's reciting a train song). ● The rhythmic ground was continually interrupted in the beginning of the improvisation.
Conflict and Resolution	● Victoria and Mark asked to go see their mothers. ● Musical tension was sustained through the client's vocal timbre and body movements. ● At the end Victoria joined in the music therapist's melody and sang, "This could be so much fun." Mark added, "Like do do do," on a descending stepwise melody and asked for Simon's Bells.
Emotional Expression	● The improvisation began with Mark in an anxious, dysregulated state, where he perseverated on statements about China, and with Victoria crying and kicking on the floor.
Holding	● The music therapist played the piano with open voicings, wide range, and rich harmony, which appeared to hold the emotions of both group members.
Music Therapist Control	● There was a cyclical tension and release in elements mainly controlled by the music therapist like melody, harmony, tonality, rhythm, and lyrics. ● The music therapist repeated his melodic and lyrical theme and provided a pulse and harmonic progression to create structure.
Client Control	● Mark and Victoria took leadership roles in the rhythmic ground, volume, timbre, and lyrics where they exhibited the most control over the improvisation. ● Victoria and Mark's timbre and lyrical content were the most salient aspects of this improvisation. The rhythmic ground and figures conformed to the lyrics and timbre of Victoria and Mark.

Fragmentation. This improvisation contained notable fragmentation musically and interpersonally. Mark and Victoria both presented in a distressed state, but had very different ideas about what the content of the improvisation should be. In the first section of the improvisation Mark was talking and singing about China in a rote manner, and Victoria was asking for her mom and then initiated a different song. When the music therapist verbally invited Victoria to come join in the song about China, Victoria refused. Then he asked Mark to check in with Victoria to see what she wanted to do, but Mark did not follow through.

Ultimately, the music therapist moved physically closer to Victoria while continuing to play about China. As the music therapist was pulled between their two states and lyrical ideas, he moved both musically between Victoria and Mark. He attempted to incorporate both of their ideas into the improvisation. For example, the music therapist briefly contrasted the original style of the improvisation by moving into a Chinese pentatonic style, seeming to try to support Mark's lyrical ideas. Then Victoria began to sing a different song over the music therapist and he ultimately returned to the traditional jazz harmony he had previously established. The rhythmic ground was continually interrupted during this section of the improvisation by verbal interactions between the clients and music therapist.

The fragmentation between members was also evident in the differentiation between musical elements. Volume and tempo were the most contrasting elements. In the beginning of the improvisation, Mark differentiated from the group by playing the piano loudly and at a faster speed than the guitar. His playing contrasted Victoria's quiet vocalizations and the music therapist's moderate volume. Victoria used also tempo in a contrasting manner when she took the music therapist's hand and made him strum faster, and when she vocalized later at a faster speed than the music therapist's melodic rhythm. Additionally, Mark and Victoria's

vocalizations were differentiated from the music therapist's music lyrically, in rhythm, timbre, and phrasing.

Conflict and resolution. There was some conflict between the clients and music therapist. Both Victoria and Mark were requesting to leave and saying they wanted their moms. This conflict manifested in musical tension that was sustained through the clients' vocal timbre and body movements. Most other elements of the improvisation were congruent to the level of musical tension including rhythm, timbre, the tonal center, volume, phrasing, body, and the group's interpersonal relationships. The therapist's harmony, melody, texture, lyrics, and verbal reactions were responsive to the clients' seemingly distressed state while remaining centered, ultimately promoting a calmer state. Toward the end of the improvisation, both Victoria's and Mark's energy shifted. Victoria sang the lyrics, "This could be so much fun," and moved freely around the room, and Mark initiated a vocal melody with a less nasal timbre. Then he selected a new song for the group to sing, which cued the music therapist to close the improvisation by resolving the harmony to the tonic.

Client control. The music therapist and clients each maintained control through specific musical elements. The differentiation between the clients and therapist control seemed to be related to the conflict, tension, and fragmentation described above. Mark and Victoria controlled the rhythmic ground, volume, timbre, and lyrics, and their timbres and lyrical content were the most salient aspects of this improvisation. When Mark or Victoria offered vocalizations the music therapist utilized empathy techniques like incorporating their lyrics and melody or pacing by matching their energy and tension in harmony and melody.

Music therapist control. The music therapist was responsible for creating musical structure; he created and repeated themes, provided a pulse, and improvised a harmonic

progression. Therefore, the music therapist had control of the tonal ground, melody, harmony, texture, phrasing, and rhythmic figures. These elements were used in a balanced manner and worked together to build and release tension and support the clients. For example, the tonal ground remained stable while the harmony, melody, tempo, texture, rhythmic figures, and phrasing were variable. There was a cyclical tension and release in melody, harmony, tonality, rhythm, and lyrics, which contrasted the client's tense music making.

Holding. Overall the music therapist took on the role of holding and reflecting the emotions of the clients until they indicated they were ready to move on. The open voicings, wide range, and rich harmony on the piano appeared to hold the emotions of both group members. The stability of lyrics, meter, and the MT maintaining the rhythmic ground and theme of the second half of the improvisation all contributed to the holding environment he created.

Emotional expression. Significant emotional expression occurred within this experience from all parties. The improvisation began with Mark in a dysregulated state, perseverating loudly about China in an anxious manner, and with Victoria crying and kicking on the floor. Their distress set the tone for the improvisation and controlled the other musical elements, infusing emotional intensity into the overall improvisation.

Throughout the improvisation the music therapist offered empathy to the Mark and Victoria's emotions through reflecting, imitating, incorporating, and pacing. In the beginning of the improvisation he offered a reflection by singing "What's the matter?" with a concerned vocal affect and used simple melodic intervals. Eventually, the music therapist moved to the piano and musically reflected the emotional content of the room through his descending melody, lyrical content ("Everyone's upset"), tender vocal inflection, and piano chords with suspensions and major sevenths.

Victoria's and Mark's vocalizations during the second half of the improvisation were emotionally expressive. Mark vocalized on long tones over half steps resolving in key, and Victoria repeatedly sang phrases like, "Mommy," or "I want to go home." Victoria's vocalizations were increasingly intense throughout the improvisation. First, she used descending intervals in a similar tempo to the music therapist, but as the music progressed, she used chromaticism, and then she started to cry. Finally, her volume and speed increased reaching a climax. The music therapist adapted his melody, lyrics, dynamic, and harmony to support Victoria and Mark in those moments. His lyrics included, "You're upset," "It's okay to be upset," and "Victoria's crying." He used some of the same melodic intervals as both Mark and Victoria and matched his volume to theirs.

Description of the Final Session

The improvisation began with the music therapist asking Victoria what they should sing about as she held the microphone. He played a B-flat7 chord to a C7, creating a melody and a rhythmic ground by arpeggiating on eighth notes. Mark hummed in key, and then the music therapist initiated a melody on the lyric "Pokémon," because Mark was reading a book about Pokémon. The music therapist then intensified the music and prompted engagement through his lyrics. He increased the volume on the piano, played a tremolo, and sustained the C7 longer than in previous phrases before resolving to Dm singing "Which one do you see?" Then he repeated that melody to ask Victoria, "What should we sing about?" Mark and Victoria both vocalized but their lyrics and pitch were not related to the ongoing improvisation or each other. Then the music therapist attempted to engage them again by verbally directing them to come to the piano, eventually getting up from the piano to guide them to the piano more directly. He attempted to incorporate both of their ideas again by saying "Let's read our book together and sing."

The music therapist shifted to a stride piano pattern maintaining the eighth note base, and he continued to try to support and elicit engagement from Mark and Victoria. He incorporated both of their vocalizations into lyrics and continued to ask what they should sing about. However, often when one client initiated an idea, the other either withdrew, or initiated something contrasting. For example, Mark loudly sang the word "four," and the music therapist started a countdown, but then Victoria began to whine for her mom. While the music therapist checked in with Victoria, Mark walked away and recited actors' names.

Eventually the music therapist returned to the stride pattern and repeated the melodic and lyrical theme leaving space between phrases. Victoria imitated him by echoing the lyrics and melody with staccato articulation in the spaces twice. Mark continued to read his book on the floor, so then the music therapist asked, "Should we sing about Pokémon?" and Victoria replied, "Next." She went to the cabinet to take out egg shakers and the music therapist tried once more incorporate Pokémon into the lyrics, with little response from Mark or Victoria. Then he called them both over to the piano. He took Mark's book and placed it to the side, and then asked for an egg. Victoria put them down on a chair and said, "No," as she walked away from the music therapist and Mark. The music therapist got up from the piano and engaged with Mark. He asked Mark how many eggs he wanted, and Mark became re-engaged, asking for three eggs. Victoria picked up the microphone and re-joined the musical play by singing, "...and the microphone" after the music therapist counted out Mark's eggs. A new melodic and lyrical theme emerged from that interaction and the music therapist sang, "We've got four eggs and the microphone."

While maintaining a pulse on his shaker, he asked Victoria to sing for them and she joined him quietly. The music therapist then modeled drum play by adding "...and two drums," at

the end of the phrase while beating each one. Neither Mark nor Victoria seemed interested in the drums so instead the music therapist modeled playing the shakers for Mark and verbally prompted him to join. Mark synchronized with him while also singing "ooh ma, ooh ma, ooh ma." The music therapist joined him and then returned to main theme. Victoria joined in the musical play and showed interest in Mark by singing "three eggs," and then singing "Mark" in space left by the music therapist. Victoria also shared her microphone with the music therapist and let him hold it out for Mark to sing into. When Mark didn't sing, she waited and then vocalized herself. The music therapist echoed her melody and gave her the microphone back.

The music therapist tried to bring Mark back into musical play by singing, "We've got four eggs and a tambourine, from the country of..." with a crescendo and tremolo on the last word of the phrase, implying the desire for a response from the group members. Mark looked at him and filled the space whispering, "Taiwan." While this interaction was occurring, Victoria began to pretend to be on the phone and no longer seemed connected to the music therapist or ongoing interactions. The music therapist included the tambourine in the original lyrical idea, playing quarter notes on it as he sang. Then he created a section where he gesturally and verbally prompted Mark and Victoria to beat the tambourine one, two, and three times. They both completed the phrases as modelled by the music therapist.

Then Victoria picked up the microphone and the music therapist returned to the main theme and sang about his and Victoria's instruments: "We have one microphone and a tambourine." At the same time Mark took out all the eggs and placed them on a stand. Both Victoria and the music therapist walked over to Mark while the music therapist started counting the eggs. Victoria walked away singing, "Mark has the eggs." The music therapist varied his lyrics and phrasing as Victoria interjected similar melodic and lyrical ideas, both singing about

the eggs and identifying which instruments they each played. At one point the music therapist asked Mark how many egg shakers he had, and Mark counted them in Spanish. The music therapist used that in the original theme singing, "We've got eleven eggs." Mark joined him on the word eleven, and Victoria asked, "What's eleven?" Then Mark began quietly singing about eleven eggs to the tune of "Five Little Ducks." Victoria walked over to him with the microphone, held it out for him, and then walked away. The music therapist said, "Oh come back, let him sing," and she shared her microphone with Mark as he sang. Mark initiated the song "Roll Over" by pushing the eggs off the stand one at a time. The music therapist said, "That's a great idea," and they transitioned into a new experience.

Final session meaning categories. Five meaning categories were developed from the process of coding and comparing the open, musical, dynamic, and group leader descriptive narratives. They included *differentiation, music therapist bridging communication, music therapist modelling, joining musical play, and stability vs. instability* (see Table 3).

Table 3

Meaning Categories of the Final Improvisation

Meaning Categories	**Selected Key Statements**
Differentiation	● The client's verbalizations were at times incongruent and unrelated to the improvisation, like Mark reciting actor's names, and Victoria pretending to have a phone call. ● Mark and Victoria paced the room and removed themselves physically from the group.
Music Therapist Bridging Communication	● The music therapist asked Victoria what she wanted to sing because she was standing with the microphone. ● Since Mark was looking through a Pokémon book the music therapist suggested they sing about Pokémon. ● He incorporated the clients' behavior by making the theme about which instruments they were each playing.
Joining Musical Play	● Victoria imitated the music therapist by echoing the lyrics and melody with staccato articulation. She interjected similar melodic and lyrical ideas. ● Mark synchronized with the music therapist vocally, singing "ooh ma, ooh ma, ooh ma." ● Victoria shared her microphone with the music therapist and held it out for Mark as he sang.
Stability vs Instability	● The music therapist used repeating lyrics, tonal centering, and rhythmic grounding to create a structure for their music making. ● He plays a B-flat7 chord to a C7 creating a melody and rhythmic ground by arpeggiating on eighth notes. ● The rhythmic ground was disrupted by verbal interactions between group members and the music therapist getting up from the piano to give gestural cues.
Music Therapist Model	● The music therapist added to the end of the phrase, modeling playing the drums singing "and two drums" on a descending line. ● The music therapist gesturally cued Mark and sang, "Beat it once." Then the music therapist sang, "Hit it twice," and went to Victoria and sang "Beat it three times."

Differentiation. There was differentiation between the clients in the improvisation. The improvisation began with Mark reading a book by himself, and Victoria fiddling with a microphone. Throughout the improvisation when the music therapist was interacting with one client, the other would often lose interest in the interaction, walk away, or initiate an unrelated idea. For example, when the music therapist and Mark sang a countdown together, Victoria asked for her mom. When the music therapist and Victoria sang together, Mark stood to the side and put all the eggs on the music stand. At times, the clients' verbal reactions and body movements were incongruent to the improvisation. Mark and Victoria were disconnected from the ongoing music making when Mark recited actors' names and Victoria pretended to have a phone call. Both Victoria and Mark paced the room and removed themselves physically from the group. Their body movements were fused to certain elements like meter but differentiated from others like melody and lyrics, ultimately providing a variable range of movements. The way the clients moved in and out of interactions through these body movements gathered and released tension.

Music therapist bridging communication. The music therapist often took on a role where he worked to bridge Mark and Victoria's communication. Since Victoria was holding the microphone and Mark was reading a Pokémon book at the beginning of the improvisation, the music therapist asked Victoria what she wanted to sing, and incorporated Pokémon into his lyrics. Overall, the music seemed to be focused on promoting awareness between the clients and to help them complete ideas that they had initiated but did not follow through.

When Victoria began to vocalize about missing her mom, the music therapist asked her, "What's the matter? What should we sing about?" When Mark listed actors the music therapist, slowed the tempo and played with legato articulation to ask Mark who they are. Similarly, when

Mark loudly initiated singing “four” the music therapist extended his idea by first singing in unison with him and then starting a countdown. In general, the music therapist supported vocal play by imitating the spontaneous vocalizations of the clients, creating repeating phrases, making spaces, and introducing changes in phrasing.

In the second section of the improvisation, the music therapist musically directed attention to each client by making the main theme about which instrument each group member was playing. The music therapist also encouraged awareness of others through procedural techniques. He used verbal redirection and gestural cues to redirect Mark and Victoria to rejoin musical play and to bring them physically closer together. The final verbal prompt was from the music therapist was to encourage Victoria to share her microphone with Mark. She followed through which supported Mark as he initiated a new experience.

Music therapist modeling. The music therapist also modelled ways for the clients to join musical play in new ways. He modeled drum playing by adding lyrics to the end of the main melodic phrase, singing “and two drums,” while beating each drum. He repeated this phrase once more with a gestural prompt and leaving space in the music. He used a similar approach when prompting Victoria and Mark to play the tambourine. Verbal and gestural cues along with musical techniques like repetition, making spaces, and modelling rhythmic patterns were all used to elicit greater participation from the clients.

Joining musical play. In this improvisation, Victoria and Mark both successfully joined musical play. When the music therapist prompted them to play the tambourine Victoria and Mark engaged in instrumental play. Overall, the client’s vocalizations and verbalizations significantly impacted the improvisation by providing direction for the improvisation. Victoria consistently engaged in vocal play. Initially, she sang quietly when prompted by the music

therapist. Then she imitated the music therapist by echoing the lyrics and melody of his primary themes. As the improvisation progressed, she also created her own vocal parts by initiating melodic and lyrical variations of the music therapist's themes. Eventually, she even referenced Mark by name when she sang, "Mark has the eggs," on a melody she initiated. Mark also engaged through vocal play in a significant way. He was the first group member to vocalize, humming in the key of the music therapist's piano playing. Then after Mark seemed withdrawn, he rejoined play by verbally selecting how many eggs he wanted from the music therapist. When the music therapist prompted Mark to play the eggs, Mark synchronized to his rhythm by singing "ooh ma, ooh ma, ooh ma," in time with the music therapist's egg shakers. Mark also joined vocally by completing phrases like whispering "Taiwan," when asked where the tambourine was made, and singing the word eleven when the music therapist sang "We've got eleven eggs."

The clients also interacted through movement. Victoria shared her microphone with the music therapist and Mark, and she brought out the egg shakers for everyone to play. Mark's physical action of pushing the eggs off the stand created opportunities for more interaction between the himself and the group. Mark and Victoria began to show capacity to engage in more collaborative play with support from the music therapist.

Stability vs. instability. The contrasting forces of this improvisation seemed to manifest in a pull between stability and instability. The music therapist worked to create stability and structure for the music making. He used tonal centering and rhythmic grounding throughout the improvisation. The rhythmic ground manifested in eighth note patterns on the piano and egg shakers, while shifting to quarter notes on the tambourine. The rhythmic figure ground was integrated while the rhythmic part-whole was fused to other elements. Overall, the rhythmic

ground had a contributing level of salience, varying in prominence throughout the improvisation, and it was disrupted at times by the interactions between group members.

The music therapist's tonal grounding was his continual return to melodic themes that were closely related to other musical elements. The lyrics that accompanied the melody were a salient feature of the improvisation because the music therapist's lyrics gave the improvisation its direction and structure. Timbre was another salient element because the instrument choices and therefore timbre created the basis for the entire second half of the improvisation.

Other elements had complex relationships to each other. Some were calm, stable, and congruent to each other, while volume, tempo, phrasing, and texture were all variable. Phrasing was often differentiated as Victoria and Mark vocalized at different times and for different lengths of time. Volume and texture were integrated with other elements, but the register and configuration of the improvisation was fused to other elements like melody. Volume had one of the most varied roles within the improvisation. Although it gathered and released tension, volume was integrated to other elements and at times was centered between feeling states and took a supportive role.

Overarching Themes Across the Time Points

The meaning categories of each improvisation were compared in regard to similar themes, patterns of relating, and musical material. New categories were developed with the wider perspective, and the original Key Statements from each improvisation were sorted into the new categories. The Key Statements in each category were counted to recognize any changes overtime. Five main themes were delineated, including: stability and structure, differentiation and conflict, togetherness, therapist roles, and client roles (see Table 4).

Table 4

Overarching Themes

Themes	Subthemes	Number of Key Statements from the first session	Number of Key Statements from the middle session	Number of Key Statements from the final session
Stability		8	12	9
Differentiation and Conflict		4	10	10
Togetherness		5	2	5
Therapist Role				
	Structure Provider	4	8	4
	Connector	3	3	5
	Empathizer	3	5	1
	Elicitor	3	2	9
Client Roles				
	Victoria Initiator	5	5	2
	Victoria Withdrawer	0	2	5
	Victoria Collaborator	1	1	10
	Mark Initiator	7	4	4
	Mark Withdrawer	0	2	5
	Mark Collaborator	1	1	12

The *stability* of the improvisations was how the music and the music therapist provided structure and security. Moments of musical congruence between the group members also contributed to stability in the group. The rhythm, harmony, lyrics, and repetition of melodic themes helped support stability in every improvisation. In the first improvisation, stability manifested in the song structure that emerged through the musical form. In the middle improvisation, the centeredness of structuring elements like meter, harmony, and melody, helped promote a calmer release of tension and emotional expression. In the final improvisation, eighth notes were used as a basic pulse on both the piano section and the percussion and voice section which encouraged continuity and stability in the music. Stability also manifested in integration and congruence through musical elements, particularly in the first and final improvisation.

Differentiation and conflict was another common theme in all three improvisations that describes contrasting states within the music and interpersonal relationships. In the first experience this differentiation manifested in the contrasting A and B sections of the music, shifting from an up-tempo rhythmic groove in the A section to a freer and more open B section. Differentiation in Mark's volume and Victoria's timbre demonstrated that at times their individualized music making was separated to some degree from the group.

This differentiation and conflict intensified in the middle and final sessions, often manifesting in a disruption of the rhythmic ground, separate initiations, or contrasting feeling states. In the middle improvisation, Mark wanted to sing about China while Victoria vocalized about missing her mom. In the final improvisation Mark was reading a book while Victoria set up a microphone stand. The second improvisation also had a notable conflict where both group members were requesting to leave the session and go see their parents. There was an emotional intensity to their vocalizations which became the theme of the improvisation. The tension of this

conflict manifested in the client's timbre and body movements and remained tense for most of the experience. Other elements like rhythm, phrasing, volume, and the tonal center were congruent to that level of tension, contrasting with the therapist's more centered playing. In all the improvisations, there were also differences between musical elements. For example, one client singing or playing louder and faster than the group in a contrasting or dominant manner.

Although differentiation and conflict were aspects of the group dynamics, *togetherness* was another essential part of the experience, where the group members engaged in collaborative musical experiences. In the first improvisation this togetherness could be observed both in the clients and therapist interacting to create lyrics and melodic themes, and in the musical elements having the same level of salience and equally contributing to the improvisation. Mark and Victoria were seeking each other out, playing together, and including each other. In the second improvisation there was a moment where Victoria, Mark, and the music therapist came together and moved out of the intense emotional state that they were previously in. Victoria sang, "This could be so much fun." The music therapist expanded her idea by singing "We could sing what we want to sing." Then Mark spontaneously initiated a new melodic line. A similar moment occurred at the end of the final improvisation where Victoria held the microphone for Mark, coming over to support his initiation of a new song.

Certain musical elements were particularly influential within these improvisations. Victoria and Mark both consistently impacted the music through melodic and lyrical themes, movement, volume, and timbre. Mark demonstrated the most individualized autonomy in volume, while Victoria used varied vocal sounds that were imitated by the music therapist. She demonstrated the most individualized autonomy in timbre. Rhythm and rhythmic ground were

other recurring themes throughout all of the improvisations. The pulse along with the lyrics and melody of the lyrics helped to give direction and structure to the improvisation.

Music therapist roles. Across the three improvisations, the music therapist took on five primary roles: *structure provider, connector, empathizer, holder, and elicitor*. When providing *structure,* the music therapist used tonal centering and rhythmic grounding in all three improvisations through the melody, harmony, rhythm, and meter he created. Often it appeared that the elements controlled by the music therapist demonstrated a more structured, grounded role in the improvisation. The elements that the music therapist influenced were involved with cyclical tension and release, had equal salience, and were either congruent with the tension of other elements or centered between tension levels.

The *connector* role often involved supporting interactions or bridging ideas between Mark and Victoria. The music therapist incorporated both members' differentiated contributions into the improvised themes or used verbal and gestural prompts to promote a greater awareness of each other. The role of *empathizer* was embodied through connecting to the emotionality and musicality of the clients. When the music therapist imitated or incorporated vocalizations of the clients, matched their energy level, or reflected their emotional state through tension, rhythm, melody, harmony and lyrics, he offered empathy and validation to the clients. The music therapist took on the *elicitor* role when he attempted to encourage participation or engagement through creating space in the music, modeling singing or instrumental play, repeating phrases, and verbal or gestural prompts.

In the first improvisation the music therapist embodied these roles somewhat equally, with one more instance of structuring than the others. In the middle improvisation, the music therapist more frequently was noted as providing structure and empathizing. In the final section

the music therapist acted as an elicitor, connector, and structure provider more frequently than empathizer. The music therapist's changing roles corresponded with increased togetherness and differentiation in the music and more instances of the clients being collaborators. The role of connector seemed to bridge the patterns of togetherness and differentiation while supporting the clients in interacting with each other.

Client roles. Both clients took the roles of *initiator, withdrawer, and collaborator* in their own ways. The role of *initiator* describes the clients spontaneously contribution of new musical material or providing leadership in the improvisation. Mark took on the unique role of initiating each section of the first improvisation, and in the middle and last improvisations he contributed the first vocalizations and initiated songs he wanted to sing after the improvisation ended. Mark and Victoria both contributed new ideas to the improvisation through their movements and vocalizations in all three improvisations. Mark's vocal initiations were often briefer than Victoria's, who entered into back and forth singing with the music therapist in every improvisation. Mark's vocalizations were typically characterized by a loud volume while Victoria's were distinguishable through timbre.

Withdrawer is used to term when the clients removed themselves from ongoing interactions, engaged in self-directed play, or were unavailable for engagement. This occurred in the second improvisation when Mark recited information about China while Victoria lay on the floor kicking her legs. In the final improvisation, Mark and Victoria had incongruent movements and verbal reactions that separated them from the ongoing musical interactions.

Collaborator refers to joining in musical play with the music therapist or peer and contributing as a partner to the improvisation. For example, in the first improvisation Victoria and the music therapist exchanged vocal ideas and both initiated and incorporated each other's

music. In the second improvisation, Victoria and Mark both were partners with the music therapist in releasing tension through phrasing and melody. In the final improvisation, Victoria and Mark significantly contributed to the melody, lyrics, timbre and volume of the improvisation which were all particularly salient elements. They also joined in therapist directed play, singing and beating the tambourine when prompted, and Victoria showed a greater interest in Mark, singing his name multiple times, and holding the microphone for him to sing into at the end of the improvisation.

Over the course of the clinical year instances of pure initiation decreased. However, at the same time, instances of playful interactions increased dramatically from the first and middle improvisations to the final improvisation. This indicates a shift from individually-oriented music making to interactive, shared play with other the group member. The shift towards the collaborator role corresponded with an increase in the withdrawer role. In the first improvisation there were no notable instances is withdrawal, but in the following two improvisations observed it increased steadily. Despite the increase in withdrawing actions, the clients more often engaged in collaborative play than withdrawal.

Discussion

The qualitative content analysis of three video recorded IMT sessions resulted in descriptions of how the roles the therapist and clients took in the improvisation, in relation to each other, created overarching patterns promoting a wider range of engagement. The client's three primary roles were *initiator, withdrawer, and collaborator*, and the therapist's roles were *structurer, empathizer, elicitor, and connector*. These roles interacted to create a pull between individually being separate from the group and joining in a shared experience, which was often contained and supported by the music and the music therapist. The group dynamics manifested

in the music and the way the clients related to each other in musical play. *Differentiation* occurred as a result of the clients' initiating and withdrawing roles. In response, the music therapist acted as an *empathizer* and *structurer*. The music therapist's role of *structurer* and *empathizer* created *stability* within the improvisation, which kept the group musical experience intact despite the differentiation that was occurring. The *togetherness* in the music came from the clients' role of *collaborator*, which was supported by the therapist's role of *connector* and *elicitor*. The clients were able to offer their own ideas in moments of shared music making, often with the support of the music therapist. Therefore, the roles of the group members were closely related to the musical, dynamic patterns of the improvisations.

Musically, in all three improvisations there were themes of *differentiation and conflict, stability*, and *togetherness*. Specific musical elements manifested the conflict between differentiation and togetherness, where certain elements existed in contrast to the rest of the improvisation. The clients differentiated from the existing music with their own distinct volume, timbre, or speed. In the middle improvisation, there was a strong division between the client-controlled musical elements that sustained tension like movement, timbre, rhythm, the tonal center, volume, and phrasing, while the music therapist's use of melody, harmony, texture, and lyrics released tension and created a holding environment. In both the middle and final improvisations, the clients disrupted the rhythmic ground created by the therapist. Even though the musical elements used by the clients and music therapist were contrasted at times, the clients also musically joined together in collaborative play and initiated their own ideas with intent to contribute to the improvisation. The clients sang together, moved together, and experienced moments of congruence in vocal melodies, lyrics, and rhythm. This was often supported by the music therapist who created musical structure to contain the interaction, empathize with the

client's feeling states, model and elicit new musical responses, and connect the ideas of the children into a cohesive whole. *Stability* in rhythmic ground, tonal centering, and repetition by the music therapist was necessary to support both the *differentiation* and *togetherness* that existed in the improvisations.

A social microcosm existed within the relationship between the roles taken on by the clients and the therapist, where areas of need and growth occurred. There was a central conflict between withdrawing, individuality, and togetherness. In the first analyzed session, the differentiation within the group often came from client initiations that strongly contrasted the established musical context. The group members demonstrated a desire to and capability to join in musical play, but at times their manner of doing so created challenges for the music's stability and the group's ability to be collaborative. For example, there was a disparity between Mark and Victoria's dynamics in their vocal initiations that lacked congruence to the ongoing musical process, but their melodies and lyrical content were quite related to the rest of the group. In the second and third analyzed session both Mark and Victoria had different ideas the brought into the improvisation and would more often engage in those ideas without the observable intent to share them with the group. At the same time, when supported by the music therapist and the music's ability to create structure and flexibility, they had more moments of collaboration and shared emotional experiences. The results could be described as a basic "together or not" dynamic, but it was not a dichotomy or linear progression. The occurrence of *stability*, *togetherness*, and *differentiation* through the roles of the group members were in constant flux throughout the clinical year.

The constant interplay between stability, togetherness, and differentiation, provides insight into what music therapy groups and the group dynamics can provide for Autistic children.

The difficulty of being in collaborative, joined play, is not unique to the music therapy realm. Difficulty forming relationships and with social interactions are two of the core features of ASD defined by the DSM-5 (American Psychological Association, 2013). The way Victoria and Mark withdrew from musical interaction both by requesting to leave in some sessions or in engaging in self-directed playing is a part of how they naturally are in relationships with others. The challenge of being together in relationship and the transcendence of music is common in other cases. In traditional psychotherapy, the term resistance is used to describe client's behaviors like withdrawing from interaction or not cooperating with the therapist's intervention (Wigram, Bonde, Bonde, & Ole, 2002). However, resistance can be understood through a relational perspective (Soshensky, 2018; Turry & Marcus, 2003). Soshensky (2018) states that resistance is a response to interaction between the client and therapist and involves a missed communication between them. He gives the music therapist the responsibility to adapt to the client's defensives and find ways to communicate that can be received by the client. He uses a clinical example of an Autistic adult, who would only sustain his interest for brief periods of time before walking out of the room or requesting they sing good-bye. Soshensky understood this behavior as a form of self-preservation that needed to be accepted, while providing opportunities to be in relationship with him in new ways. For this client, music with a powerful rhythmic groove and by singing songs about good-bye without saying good-bye helped him to engage in active music making where he improved his attention, social interaction and self-confidence. Similarly, Mark and Victoria requested to leave and separated themselves from the group. They appeared to be communicating to the therapist they needed a break from the musical interaction or that they didn't know how to communicate within the ongoing musical interaction. At the same time, the music therapist was there providing security and empathy in

the music, always inviting them back into musical play, and connecting their ideas, giving them a place in the music, even when they could not find it for themselves.

The conflict between the group members and the music therapist involved this pattern of withdrawing and rejoining interaction with the group. Simultaneously, closeness between Mark and Victoria and the group members and the music therapist was a significant force in the interpersonal dynamic through collaboration. Qualitative studies (Aigen, 1997; Sorel, 2010) also noted the significance of conflict and resolution in the group dynamic and process of music therapy groups with Autistic children. In the mother-son dyad, Sorel (2010) describes conflict between the mother and son, where the son was continually seeking out his mother while she withdrew and wanted to take time to focus on herself as an individual. At the same time, the other significant dynamic between the participants was musical intimacy and it seemed as if the participants relationship was strengthened.

The duality of together and apart occurred organically and was held in the music itself. There were multiple forces of togetherness, stability, and differentiation, which was observable through conflict and disruptions, along with growing cohesion. This is congruent with Skewes (2002) findings that a unique aspect of improvised group music therapy experiences was the possibility for multiple communications to occur simultaneously and for group dynamics to manifest musically. The centrality of music to contain the tension between togetherness and separation in growing relationships was also present in the cases described by Sorel (2010) and Aigen (1997).

The simultaneous occurrence of differentiation, stability, and togetherness in the musical group dynamics contrasts Eren's (2015) description that the group dynamics of that case was consistently improving group cohesion due to growing trust. The interwoven conflict and

cohesion between Mark, Victoria, and the music therapist within the music is not as linear as Eren's description of group dynamics, and instead is more similar to Aigen's (1997). In fact, Aigen (1997) described the importance of the music in supporting deeper emotional connection between group members, and how emotionally charged experiences or conflict often proceeded individual progress. His description seems more aligned with the experience of the group observed in this study. In the middle section, the emotional distress and desire to leave the group was reflected in the music. Rather than only trying to redirect the group back into play, the music therapist created structure to contain the emotion through holding and created melodic, harmonic, and lyrical figures that were focused on expression of the client's emotions. It was through that contact that the clients were able to remain in music and join in musical expression. The music therapist accepted where the clients were and found a way to connect them through that.

Over the course of the three analyzed sessions, the interactions between group members became more greatly varied and the group was able to enter more collaborative play. In music centered practice, like Nordoff-Robbins Music Therapy or DIR-based IMT, deepened musical involvement is the primary indicator of therapeutic change (Turry & Marcus, 2003). There were specific musical elements that were salient to the group process when the clients were most expressive. Across all three time points, the client initiated, differentiated from the group, and joined in musical play through melody, lyrics, timbre, volume, speed, and body movements. When Mark and Victoria demonstrated more influence over the music in a leader or partner role, the elements they used were often the most influential to the improvisation overall. The way they used these elements changed overtime. For example, in the first analyzed improvisation the client's body movements, timbre, volume, and lyrics were often individual invitations in context

of the improvisation. In the second analyzed improvisation, the client's timbre, lyrics, melodies, and body movements were tense and related to the interpersonal conflict. In the final session, there was still some tension and withdrawal embodied in their use of elements. For example, both Mark and Victoria used movement to separate from the group or lyrical initiations to differentiate from the group, but they also joined directly in rhythms and melodies, matching the other group member or the music therapist's music, while also using those musical elements in a creative and interrelated manner.

The music therapist often used imitation or incorporation of the client's music which supported the prominence and control the clients did have within the music. Another recurring musical element was the music therapist's use of an eighth note pulse to provide a rhythmic ground. The way the clients either joined into the pulse, initiated a faster tempo, or caused the music therapist to abandon the rhythmic ground completely was a good marker of the level of differentiation or collaboration within the music. The way these elements were used manifested the group dynamics.

Implications For Practice

This study demonstrated the formation of a social microcosm through the musical interactions of Autistic children and their music therapist. That social microcosm embodied the clients' areas of need. Based on the patterns of interaction in this group, engaging in a shared experience appeared to be the greatest challenge for the clients. In individual music therapy sessions, relatedness is a main goal area. Relatedness has previously been found to increase in Autistic children participation, initiation, and positive responses to directions (Kim et al., 2009; Knapik-Szweda, 2015). In this study, there were similar changes in ways of connecting. Both clients became more interactive with the therapist and each other over the course of the group.

Greater collaboration was fostered through the differentiation and conflict. The clients' expanded way of relating to each other indicates the dynamics of a music therapy group of Autistic children can help them grow.

This study also demonstrated how flexible a music therapist may have to be in a group setting. In this group, he often moved between a variety of roles and frequently shifted his attention between each group member. The music therapist implemented the treatment model of developmental, individual difference, relationship-based improvisational music therapy. He moved between following the clients' lead, scaffolding interactions, and engaging in joined play fluidly based on the way the clients presented. This seemed to help him support interactions between the group members and himself through the main group conflicts.

Limitations. One of the limitations of this study was the group size. Observing a dyad helped to closely analyze the relationships within the group. However, many music therapists facilitate groups in a school setting with larger groups. A larger group may have different dynamics and more individualized roles taken by each client, which was not possible to observe in this study. Another limitation was that the researcher was an outside observer. The participating music therapist may have had better insight into group rather than the researcher. Along that line, the research method implemented did not incorporate the direct perspective of the participants or a second data source other than the clinical video. Having multiple data sources might help create a fuller understanding of the group. Future research could address some of these limitations by including a participant researcher, incorporating interviews, and sampling a larger group.

Conclusion

The purpose of this study was to describe group dynamics of Autistic children in music therapy. In this study, themes were developed based on three improvisations across the clinical year. The first set of meaning categories corresponded to each session individually to create a description of its essential characteristics. The meaning categories for the first session included working together, individual initiations, stability, and differentiation. The middle session was described by the meaning categories fragmentations, conflict and resolution, emotional expression, holding, music therapist control, and client control. The meaning categories of the final improvisations were differentiation, therapist bridging communication, joining play, stability vs instability, and the therapist models. Then the meaning categories were compared and reorganized to create three final categories to describe the group dynamics over the course of the clinical year. The number of themes from each session in final categories were noted to provide insight into how the dynamics changed overtime. The final categories were therapist roles, client roles, and general musical interpersonal themes. The therapist took on the role of structure provider, connector, empathizer, holder, and elicitor. The clients' roles were initiator, withdrawer, and collaborator. General musical interpersonal themes were structure, differentiation and conflict, and togetherness. Overall this study showed how the clients and therapist ways of relating with each other created the general structure of the group experience and supported the group members as they worked through conflict and engaged more fully in shared musical play.

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Appendix A

The Rebecca Center
For Music Therapy at Molloy College

1000 Hempstead Ave., PO Box 5002,
Rockville Centre, NY 11571
P: 516.323.3324 F: 516.323.3323

Dear Anne,

Given IRB approval, you have permission to recruit a music therapy group from The Rebecca Center for Music Therapy for your research study.

Please contact the music therapist's on staff to inquire about groups that fit your inclusion criteria, and provide informed consent from parents and the music therapist to use archival video for your data analysis. When using video of music therapy sessions, you must follow our facility's privacy policy and use our secure file sharing website to access clinical video.

Sincerely,

Dr. John Carpente, PH.D., MT-BC, LCAT
Executive Director, The Rebecca Center for Music Therapy at Molloy College

Appendix B

Dear [Music Therapist's name]

Hello, my name is Anne Crean, I am a graduate student completing my thesis at Molloy College, by conducting a qualitative content analysis to describe the dynamics of a DIR-informed improvisational music therapy group. I am reaching out to you today to inquire about recruiting a music therapy group to participate in this study by consenting to share past video of their sessions.

My inclusion criteria includes:

- Group members will have a diagnosis of ASD as confirmed by clinical record.
- Group members will be 8-12 years old. At this music therapy clinic children are placed in group sessions based on developmental capacity, so children in groups are often older than other settings.
- The music therapy group will not have worked together previous to the formation of this group so that this study can observe their group dynamics as they emerge.
- An archive of the group's videotaped sessions will be available for review
- The clinician facilitating the group has at least three years of experience working in the DIR-based improvisational music therapy approach.

If you have a group that fits this inclusion criteria, please contact me at (631) 375-2268 or ACrean@lions.molloy.edu

Best,
Anne Crean, MT-BC

Appendix C

Music Therapy
1000 Hempstead Avenue
Rockville Centre, NY 11570
(631)375-2268

Title of Study: *Group Dynamics of Autistic Children in DIR Improvisational Music Therapy*

This study is being conducted by: Anne Crean, MT-BC (ACrean@lions.molloy.edu); Dr. Heather Wagner (hwagner@molloy.edu)

Key Information about this study:

This consent form is designed to inform you about the study you are being asked to participate in. Here you will find a brief summary about the study; however you can find more detailed information later on in the form.

Why am I being asked to take part in this study?
Your child has previously participated in a group at the Rebecca Center that has been video recorded. This study will use those video recordings to learn about how children in groups at the Rebecca Center interact and how those interactions impact their growth.

What will I be asked to do?
The researcher is requesting access to the clinical video and documentation for one year of your child's music therapy group.

Where is the study going to take place, and how long will it take?
This study will take place at Molloy College and will be completed in May 2019.

What are the risks and discomforts?
The only risk for this study is a breach of confidentiality. However, as the researcher will be using the same secure file sharing site as The Rebecca Center, there are no more risks than are typical in having your child's music therapy sessions video recorded.

What are the expected benefits of this research? This research is expected to provide insight to how interpersonal relationships in music therapy groups support the growth of the participants and how those relationships manifest in the music. This knowledge can guide future music therapists to implement improved treatment, and provide direction for future research on the effectiveness of group music therapy.

Individual Benefits:
There are no direct individual benefits of this study to its participants

Do I have to take part in this study?
Your participation in this research is your choice. If you decide to participate in the study, you may change your mind and stop participating at any time without penalty or loss of benefits to which you are already entitled.

What are the alternatives to being in this study?
Instead of being in this research, you may choose not to participate. Choosing to not participate will not negatively impact your treatment at the Rebecca Center for Music Therapy.

Who will have access to my information?
The researcher and will have access to videos of the music therapy group through box.com which is the secure file sharing website used at The Rebecca Center for Music Therapy. Any identifying information will be removed from clinical documentation and the research narrative. Two music therapists from the Rebecca Center will be recruited to verify the results of the study by reviewing the videos and data analysis. The researcher and other music therapists are not permitted to download video and must view the video on box.com. After the termination of the study the researcher or verifiers will no longer have access to the video files.

How will my [information/biospecimens] be used?
Your data will be used to implement a qualitative analysis of the music therapy sessions identifying patterns and changes in interactions overtime. The results of this study may be published in a music therapy journal or presented at professional conferences.

To ensure that this research activity is being conducted properly, Molloy College's Institutional Review Board (IRB), whose members are responsible for the protection of human subjects' rights for all Molloy-approved research protocols, have the right to review study records, but confidentiality will be maintained as allowed by law.

Can my participation in the study end early?
You may choose to withdraw from this study at any time. There will be no consequence of withdrawal, and your child's treatment at the Rebecca Center will not be effected.

Will I receive any compensation for participating in the study?
No

What if I have questions?

Before you decide whether you'd like to participate in this study, please ask any questions that come to mind now. Later, if you have questions about the study, you can contact Principal Investigator Anne Crean at (631)375-2268 or ACrean@lions.molloy.edu, or Dr. Heather Wagner at hwagner@molloy.edu

What are my rights as a research participant?
You have rights as a research participant. All research with human participants is reviewed by a committee called the *Institutional Review Board (IRB)* which works to protect your rights and welfare.
If you have questions about your rights, an unresolved question, a concern or complaint about this research you may contact the IRB contact the Molloy IRB office at irb@molloy.edu or call 516 323 3000.

Documentation of Informed Consent:

You are freely making a decision whether to be in this research study. Signing this form means that

1. **you have read and understood this consent form**
2. **you have had your questions answered, and**
3. **after sufficient time to make your choice, you have decided to be in the study.**

You will be given a copy of this consent form to keep.

_____ _____
Your signature Date

_____ _____
Your printed name Date

_____ _____
Signature of researcher explaining study Date

_____
Printed name of researcher explaining study

Appendix D

Music Therapy
1000 Hempstead Avenue
Rockville Centre, NY 11570
(631)375-2268

Title of Study: *Group Dynamics of Autistic Children in DIR Improvisational Music Therapy*

This study is being conducted by: Anne Crean, MT-BC (ACrean@lions.molloy.edu); Dr. Heather Wagner (hwagner@molloy.edu)

Key Information about this study:

This consent form is designed to inform you about the study you are being asked to participate in. Here you will find a brief summary about the study; however you can find more detailed information later on in the form.

Why am I being asked to take part in this study?
Your clinical work with music therapy groups at The Rebecca Center for Music Therapy is being considered for a case study seeking to gain an understanding of group dynamics of Autistic children receiving DIR-based music therapy.

What will I be asked to do?
The researcher is requesting access to your clinical video and documentation of a music therapy group of 2-4 Autistic children aged 8-12.

Where is the study going to take place, and how long will it take?
This study will take place at Molloy College and will be completed in May 2019.

What are the risks and discomforts?
The only risk for this study is a breach of confidentiality. However, as the researcher will be using the same secure file sharing site as The Rebecca Center, there are no more risks than are typical in having your child's music therapy sessions video recorded.

What are the expected benefits of this research? This research is expected to provide insight to how interpersonal relationships in music therapy groups support the growth of the participants and how those relationships manifest in the music. This knowledge can guide future music

therapists to implement improved treatment, and provide direction for future research on the effectiveness of group music therapy.

Individual Benefits:
There are no direct individual benefits of this study to its participants

Do I have to take part in this study?
Your participation in this research is your choice. If you decide to participate in the study, you may change your mind and stop participating at any time without penalty or loss of benefits to which you are already entitled.

What are the alternatives to being in this study?
Instead of being in this research, you may choose not to participate.

Who will have access to my information?
The researcher and will have access to videos of the music therapy group through box.com which is the secure file sharing website used at The Rebecca Center for Music Therapy. Any identifying information will be removed from clinical documentation and the research narrative. Two other music therapists will review the videos and data analysis to verify the results of the study. The researcher and other music therapists are not permitted to download video and must view the video on box.com. After the termination of the study the researcher or verifiers will no longer have access to the video files.

How will my [information/biospecimens] be used?
Your data will be used to implement a qualitative analysis of the music therapy sessions identifying patterns and changes in interactions overtime. The results of this study may be published in a music therapy journal or presented at professional conferences.

To ensure that this research activity is being conducted properly, Molloy College's Institutional Review Board (IRB), whose members are responsible for the protection of human subjects' rights for all Molloy-approved research protocols, have the right to review study records, but confidentiality will be maintained as allowed by law.

Can my participation in the study end early?
You may choose to withdraw from this study at any time without penalty.

Will I receive any compensation for participating in the study?
No

What if I have questions?
Before you decide whether you'd like to participate in this study, please ask any questions that come to mind now. Later, if you have questions about the study, you can contact
Principal Investigator Anne Crean at (631)375-2268 or ACrean@lions.molloy.edu, or
Dr. Heather Wagner at hwagner@molloy.edu

What are my rights as a research participant?

You have rights as a research participant. All research with human participants is reviewed by a committee called the *Institutional Review Board (IRB)* which works to protect your rights and welfare.
If you have questions about your rights, an unresolved question, a concern or complaint about this research you may contact the IRB contact the Molloy IRB office at irb@molloy.edu or call 516 323 3000.

Documentation of Informed Consent:

You are freely making a decision whether to be in this research study. Signing this form means that

1. **you have read and understood this consent form**
2. **you have had your questions answered, and**
3. **after sufficient time to make your choice, you have decided to be in the study.**

You will be given a copy of this consent form to keep.

_____ _____
Your signature Date

_____ _____
Your printed name Date

_____ _____
Signature of researcher explaining study Date

_____
Printed name of researcher explaining study

Appendix E

From “Articulating the Dynamics of Music Therapy Group Improvisations,” by K. McFerran and T. Wigram, 2005, *Nordic Journal of Music Therapy, 14*(1), p. 33-46. Copyright (2005) by Taylor & Francis. Reprinted with permission (Appendix F).

Music Therapy Group Improvisation Analysis Model (MTGI- AM) (McFerran & Wigram, 2005)

Level of Analysis	Listening Process	Description Process
Open	A controlled and focused listening is undertaken to solicit broad impressions of the music that do not include metaphorical or symbolic meanings.	A narrative is written that describes the personal response of the listener to the musical material using a 'stream of consciousness' method.
Musical	Listening is focused on the musical properties identified as relevant within the improvisation and attention is paid to the changing or consistent nature of these properties throughout the course of the improvisation.	A narrative is written that articulates the identified musical characteristics using carefully defined terminology. This may include verbal interactions as well as descriptions of properties such as rhythmic grounds, rhythmic patterns, volume, instrumentation, speed, melodic figures, texture and embellishments.
Intramusical	Listening is directed by the profiles of Bruscia's IAPs (1987) and numeric values are attributed to the scales considered relevant by the listener across all profiles.	A narrative is generated by writing sentences about each of the scores within the relevant profiles using keywords from the IAPs.
Group Leader's Music	Listening is focused on the musical material of the group leader and considers the music	A narrative is written that describes the musical material of the group leader and the empathic, eliciting, structuring, redirecting and

	therapy techniques used as well as musical interactions with other instrumental lines.	procedural techniques used (Bruscia, 1987).
Final	A final listening is undertaken that allows the focus to return to the 'whole' improvisation, directed by the material that has been heard in previous levels.	A distilling process is used that identifies the essential aspects of the material generated through the previous four levels of listening. The final narrative is used as the basis for the verification procedure.

Appendix F

Mon, Oct 15, 8:07 PM

Anne Crean <ACrean@lions.molloy.edu>

to Katrina, tony@hum.aau.dk

Dear Dr. McFerran and Dr. Wigram,

My name is Anne Crean, I'm a graduate music therapy student at Molloy College and currently writing my thesis. I plan to investigate the mechanisms of group music therapy with Autistic children in a DIR/Floortime Improvisational Music Therapy setting. While conducting my literature review I found your article "Articulating the Dynamics of Music Therapy Group Improvisations." I'm reaching out today to request your permission to use the Music Therapy Group Improvisation Analysis Model as my main mode of musical analysis.

Best,

Anne Crean, MT-BC

Mon, Oct 15, 10:17 PM

Katrina Skewes McFerran <k.mcferran@unimelb.edu.au>

to Anne

You are certainly welcome to. Let me know how it goes.

Best wishes, Katrina

Dr Katrina Skewes McFerran RMT
Professor, Music Therapy
The University of Melbourne AUSTRALIA